

REMARKS

Claims 1-16 are pending. By this Amendment, Claims 1, 3-4, and 6 are amended and Claims 11-16 are added. Applicants respectfully submit no new material is presented herein.

Claims Rejected—35 U.S.C. § 102

Claims 1 and 3 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,588,385 to Suzuki et al. (hereinafter "Suzuki '385"). Applicants respectfully traverse the rejection.

Claim 1 recites a water-cooled vertical engine comprising, among other features, a water jacket having a cooling water outlet open to the upper part of the engine and located inside the locus of rotation of the endless transmission member, and a thermostat having a temperature sensitive portion located above the endless transmission member.

Claim 3 recites an outboard motor equipped with a water-cooled vertical engine having, among other features, a thermostat for controlling the flow of cooling water in the water jacket, the thermostat being provided in an upper wall of the engine above the endless transmission member.

Suzuki '385 discloses a water-cooled internal combustion engine having a well (156) formed in a projecting portion of an upper surface of a cylinder block (29) in the area between a driving and slack sides of a belt/endless transmission member (56). A thermostat (157) is positioned within the well (156) with an outer flange (158) clamped between the upper surface of the cylinder block projection and a thermostat housing (159) that is fixed in a suitable manner to the cylinder block between the driving and

slack sides of the endless transmission member (56). See Suzuki '385, column 9 lines 59-68.

Applicants have examined Suzuki '385 in great detail and respectfully note that Suzuki '385 does not appear to teach or suggest a water-cooled vertical engine including both a water jacket having a cooling water outlet open to the upper part of the engine and located inside the locus of rotation of the endless transmission member as well as a thermostat having a temperature sensitive portion located above the endless transmission member. For example, Figure 3 of Suzuki '385 clearly shows the thermostat (157) extending below the endless transmission member (56) within the well (156). Therefore, Suzuki '385 does not teach or suggest each and every feature recited in Claim 1.

Similarly, Claim 3 is not anticipated for the same reason that Claim 1 is not anticipated. Suzuki '385 does not teach or suggest a thermostat provided in an upper part of the engine above an endless transmission member.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987) and M.P.E.P. § 2131.

As explained above, Suzuki '385 does not teach or suggest each and every feature recited by Claims 1 and 3. Therefore, Applicants respectfully submit Claims 1 and 3 are not anticipated by, or rendered obvious in view of, Suzuki '385 and should be deemed allowable.

Applicants respectfully request withdrawal of this rejection.

Claims Rejected—35 U.S.C. § 103

Claims 2 and 4-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Suzuki '385 in view of U.S. Patent No. 4,938,185 to Doke (hereinafter "Doke '185"). Applicants respectfully traverse the rejection.

The Office Action admits Suzuki '385 does not disclose a timing cover integral with a thermostat cover, yet the Office Action asserts that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include in the Suzuki '385 device a timing chain cover integral with a thermostat as disclosed in Doke '185 to arrive at the invention of the instant application.

Claim 2 depends from Claim 1 and therefore includes each and every feature recited by Claim 1 as well as the additional subject matter recited therein.

As explained above, Suzuki '385 does not disclose a thermostat located above a timing chain. Doke '185 does not overcome the deficiencies of Suzuki '385 as the thermostat (20) disclosed by Doke '185 appears to be below a timing belt that is apparently carried by the pulley of the water or coolant pump (12), though Doke '185 does not actually disclose a timing belt. As such, Applicants respectfully submit Claim 2 should be deemed allowable for the same reasons Claim 1 is allowable, as well as for the additional subject matter recited therein.

Claims 4 and 6 recite a water-cooled vertical engine including, among other features, a cover; an endless transmission member housing chamber formed by joining the cover to an upper face of the engine block; and a thermostat being provided in a thermostat mounting seat which is formed on the cover at a position above the endless transmission member.

Suzuki '385 is discussed above. Doke '185 discloses a timing cover (16) that fixably secures to the front face (F) of a front-end section of the cylinder block (B) to cover timing gears, timing chains, or a cogged belt for transmitting rotation of the crankshaft to a camshaft of an engine. See Doke '185, column 2, line 65 through column 3, line 2. Within the timing cover (16) is an inlet passageway (18) and an outlet passageway (28). Disposed between the inlet and outlet passageways (18) and (28), respectively, is a pump impeller (12a) driven through a pulley by the crankshaft of the engine. Attached to the timing cover (60) is a water or coolant passageway (22) that communicates with inlet passageway (18). A thermostat (20) having a heat sensor section (20a) extends into passageway (18) at the union of the inlet passageway (18) and water or coolant passageway (22). See Doke '185, Figure 3.

However, neither Doke '185 nor Suzuki '385, alone or in combination, teach or suggest a thermostat being provided in a thermostat mounting seat which is formed on the cover at a position above the endless transmission member. As admitted by the Office Action, Suzuki '385 does not include a timing chain cover integral with a thermostat cover. Moreover, Suzuki '385 does not teach or suggest any timing chain cover whatsoever. Additionally, Suzuki '385 does not teach or suggest a thermostat provided in a mounting seat formed on a cover at a position above the endless transmission member. Further, while Doke '185 recites that timing cover (16) covers timing gears, timing chains, or a cogged belt, the disclosure is not enabling for that purpose. Nowhere does Doke '185 actually teach a timing cover that covers timing gears, timing chains, or a cogged belt.

Therefore, Doke '185 and Suzuki '385, either alone or in combination, do not teach or suggest each and every feature recited by Claims 4 and 6.

To establish *prima facie* obviousness, all claim features must be taught or suggested by the prior art. See *In re Royka*, 490 F.2d 981 (CCPA 1974) and M.P.E.P. § 2143.03. Therefore, Applicants respectfully submit the Office Action has failed to establish *prima facie* obviousness and Claims 4 and 6 should be deemed allowable.

Claim 5 depends from Claim 4. Therefore, Applicants respectfully submit Claim 5 should be deemed allowable for the same reasons Claims 4 is allowable, as well as for the additional subject matter recited therein.

Accordingly, Applicants respectfully request the rejection be withdrawn.

Claims 7-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Suzuki '385 and U.S. Patent No. 6,135,833 to Tsunoda (hereinafter "Tsunoda '833"). Applicants respectfully traverse the rejection.

Claim 7 recites a water-cooled vertical engine having, among other features, a first thermostat for controlling the flow of cooling water in a cylinder block cooling water jacket; a second thermostat for controlling the flow of cooling water in a cylinder head cooling water jacket; a thermostat chamber housing the first and second thermostats therewithin; and a member for forming the thermostat chamber, the member being joined to the cylinder block and the cylinder head.

Suzuki '385 is discussed above. Applicants note the Office Action admits Suzuki '385 fails to teach or suggest two (2) thermostats. Office Action, page 3, line 2. Moreover, Applicants respectfully note Suzuki '385 discloses an engine (25) having a cylinder block (29), a crankcase (31), a cylinder head (32), and a crankshaft (38)

rotatably journalled between the cylinder block (29) and crankcase (31) by means of bearings (39).

Tsunoda '833 discloses an engine cooling system having a cooling water passage (50) composed of a first cooling passage (51) formed by a water jacket in a cylinder block (33), a second cooling passage (52) formed by a water jacket in a cylinder head (34), and first (70) and second (80) thermostats incorporated into the cooling water passage (50). The first thermostat (70) is disposed on an upper surface of a cylinder block (33). The second thermostat (80) is disposed on an upper surface of a cylinder head (34).

The Office Action admits that Suzuki '385 does not disclose two (2) thermostats. Although, Tsunoda '833 discloses a first (70) and second (80) thermostats, Applicants respectfully submit that Tsunoda '833 fails to teach or suggest a member forming a thermostat chamber housing the first and second thermostats therewithin and joined to the cylinder block and cylinder head of the engine. Rather, Tsunoda '833 specifically teaches placement of a first thermostat (70) directly in an upper surface of a cylinder block (33) and a second thermostat into an upper surface of a cylinder head (34). See Tsunoda '833, column 4, lines 47-54, Figure 4, and Figure 9.

To establish *prima facie* obviousness of a claimed invention, all the claim features must be taught or suggested by the prior art. M.P.E.P. § 2143.03. Suzuki '385 and Tsunoda '833, either alone or combined, fail to teach or suggest a thermostat chamber housing a first and second thermostat that joins to a cylinder block and cylinder head.

Further, a rejection based on *prima facie* obviousness is improper where the cited prior art references fail to disclose a motivation to combine the references. M.P.E.P. § 2143.01. The level of skill in the art cannot be relied upon to provide the suggestion to combine references. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 1324 (Fed. Cir. 1999) and M.P.E.P. § 2143.01. The assertion in the Office Action that "...form[ing] the thermostats in a single chamber would have been an obvious choice of engineering design to a person of ordinary skill in the art at the time the invention was made because it would simplify the design, be less prone to leaks, and be easier to install" is improper because there is no support for this asserted motivation anywhere within the references of record. Applicants have thoroughly examined both Suzuki '385 and Tsunoda '833 and have discovered no motivation to add a thermostat chamber anywhere within their respective disclosures.

Therefore, Applicants respectfully submit that the obviousness rejection is improper and Claim 7 should be deemed allowable, because all of the features recited by Claim 7 are not taught or suggested by Suzuki '385 and Tsunoda '833. Additionally, neither Suzuki '385 nor Tsunoda '833 provide any motivation to add the absent features.

Claims 8-9 depend from Claim 7. Therefore, Applicants respectfully submit that Claims 8-9 should be deemed allowable for the same reasons Claim 7 is allowable, as well as for the additional subject matter recited therein. Accordingly, Applicants respectfully request withdrawal of the rejection.

Claim 10 discloses an outboard motor equipped with the water-cooled vertical engine described in Claim 7. Therefore, Applicants respectfully submit that Claim 10

should be deemed allowable for the same reasons Claim 7 is allowable. Accordingly, Applicants respectfully request withdrawal of the rejection.

Conclusion

In view of the foregoing, reconsideration of the application, withdrawal of the outstanding rejections, allowance of Claims 1-16, and the prompt issuance of a Notice of Allowability are respectfully solicited.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing docket number 107348-00367**.

Respectfully submitted,
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